

# M-Class Dual-Channel Amplifiers

Models M600, M450  
and M300



## Description

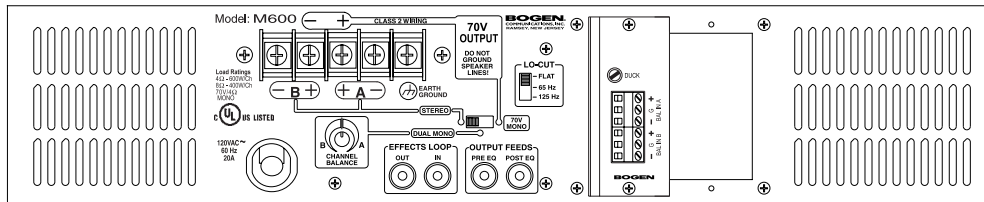
Bogen's M-Class delivers on what professional sound installers need most - Flexibility, Power, and Reliability. Flexibility - 3 modes of operation: Stereo, 70V Mono, or Dual Mono; and 2 modular input bays for a variety of prioritized input types. Power - up to 600W/ch stereo or 1200W of 70V mono power. Reliability - Massive power toroid and heat sinks; heavy 14-gauge chassis; patented Back-Slope™ AC voltage stabilization; Clip limiters, DC voltage, over-current, and thermal protection circuits.

## Features

- 3 mono power levels: 1200W, 900W, or 600W for 70V speaker systems
- 3 stereo power levels: 600W, 450W, or 300W per channel @ 4 ohms
- 3 modes of operation to choose from - Stereo, Dual Mono, or 70V Mono
- Low noise, low distortion, and high slew rate
- Flexible modular input capability (2 module capacity)
- Professional, dual-channel (balanced or unbalanced), high-impedance input module with gain selection included
- 3 selectable low-frequency, roll-off choices
- 2x1 mixer function when in mono modes
- Insert connections for outboard equipment (in mono modes)
- Post- and Pre-EQ Output Feeds (summed mono out in stereo mode)
- DC, overload, short circuit, and thermal protection circuits
- Clip limiting circuits for speaker protection
- Power-saving Sleep Mode for intermittent use applications
- Status, Signal, and Clip/Limit indicators
- Back-Slope AC voltage stabilization for dependable performance over varying AC line voltages
- Heavy-gauge steel chassis with cast aluminum front panel
- Recessed volume control knobs with snap-on protective cover
- Mounts in 2 rack spaces (3-1/2") directly stackable without need for extra space above or below
- 2 independent, continuously variable, cooling fans for dependable and quiet operation
- Easily removable front fan grilles with filters
- Stable into 2-ohm loads

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Part No. 54-5092-01R2 Printed in U.S.A. 0210



Technical Specifications	M600	M450	M300
<b>Power Output</b> 70V Mono 4-ohm 8-ohm	1200W @ 4 ohms 600W per channel* 400W per channel*	900W @ 5.5 ohms 450W per channel* 300W per channel*	600W @ 8 ohms 300W per channel* 200W per channel*
<b>Input Sensitivity</b> At Backplane Connector or using Standard Input Module (incl.)**	1.161V for 600W @ 4 ohms	1.010V for 450W @ 4 ohms	0.840V for 300W @ 4 ohms
<b>S/N Ratio (20K BW)</b>	109 dB ref. 8 ohms, F.P.	106 dB ref. 8 ohms, F.P.	103 dB ref. 8 ohms, F.P.
<b>Class of Operation</b>	H	H	AB
<b>Product Weight</b>	46 lb.	44 lb.	41 lb.
<b>Connectors: Power</b>	20A line cord***	15A line cord	15A line cord
<b>Input</b>	2 new Bogen std. 12-pin connector modules/RCA input		
<b>Output</b>	5-pin "touch-proof" Barrier Strip, RCA Pre- & Post-EQ Output		
<b>Power Bandwidth</b>	20-40 kHz .5% THD		
<b>THD @ 1 kHz rated power</b>	less than .02%		
<b>Load Impedance</b>	4-8 ohms, 70V		
<b>Minimum Load Impedance (Stereo)</b>	3.2 ohms		
<b>Frequency Response @ 1 watt</b>	20-20 kHz +/- 0.25 dB		
<b>Output Regulation, 1 kHz direct</b>	0.5 dB @ 8 ohms		
<b>1 kHz bridged</b>	1.5 dB @ 70V		
<b>Inputs (Plug-in modules)</b>	Electronically balanced, high-impedance module standard, other modular input types available		
<b>AC Input Voltage Range</b>	95-130V AC, 60Hz		
<b>Maximum AC Current</b>	20A**	15A	12A
<b>Indicators</b>	Status (On/Protect/Sleep), Clip/Limit, Signal		
<b>Temperature Range</b>	15 to 105 degrees F		
<b>Cooling</b>	Forced Air Variable Speed Fan		
<b>Physical Dimensions (W x H x D)</b>	17" X 3-1/2" x 16"		
<b>Protection</b>	RF, DC, Low-frequency, Thermal, Low-Impedance, Circuit-Breaker, Short Circuit		
<b>Special Features</b>	Sleep Mode, Back-Slope regulation, Stereo, Dual Mono, 70V Mono Operation, Toroidal Power Transformer		

\* Both channels driven at nominal line voltage 120V AC, 60Hz. \*\* Module has Gain of 1. \*\*\* Requires 20A, NEMA 5-20R Type Receptacle.

**Architect & Engineer Specifications\*** The amplifier shall be a Bogen M-Class Amplifier, Model M600, M450 or M300. The amplifier shall provide a mono 70V output capable of 1200, 900 or 600 watts respectively or, it can provide two independent amplifier channels rated at 600, 450 or 300 watts/channel into 4 ohms, respectively.

The amplifier shall provide 2 module bays for the installation of various input modules. A dual-channel (balanced or unbalanced), high-impedance input module shall come installed as a standard module in the amplifier.

The amplifier shall be capable of 3 distinct modes of operation. These are Stereo, Dual Mono, and 70V Mono. In Dual Mono and 70V Mono, the amplifier shall provide the function of a 2 x 1 mixer of the installed input modules. Additionally, in the Dual Mono and 70V Mono modes, the amplifier shall allow one module to mute the other installed module if desired.

The amplifier shall drive the speaker load directly without the use of an output transformer. The amplifier shall allow a user-selectable low frequency roll-off of 65 Hz, 125 Hz, or no roll-off.

The amplifier shall have a defeatable sleep mode that greatly reduces idle power consumption when the amplifier has not received audio for more than 3 minutes. The amplifier shall also include a clip limiting feature that automatically reduces amplifier clipping.

\* Architect and Engineer Specifications are available on CD and online in a Word document to assist you with preparing your bids.

The amplifier shall have three indicators that correspond to status, signal, and clip/limit.

The amplifier shall allow the connection of external signal processing equipment when in Dual Mono or 70V Mono modes. The signal flow shall automatically be diverted to external equipment when connected to the effects loop. The amplifier shall also provide both pre- and post-EQ signal feeds for distribution to other equipment.

The amplifier shall include a system that automatically compensates for surges or sags in AC line voltages of up to +/-10%. Additionally, the amplifier shall be protected against over-currents, overloads, excessive thermal dissipation, DC voltage, and short circuit on the outputs.

The amplifier shall be enclosed in a heavy-gauge steel chassis with recessed level control knob, which can be protected by a removable plastic cover. The amplifier shall be cooled by 2 independent continuously variable speed fans with easily removable fan filters.

The amplifier shall allow the attachment of rack ears (rear rack ears optional) and fit into a 19" rack using two rack spaces. It shall also allow the attachment of feet for tabletop placement.

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